

WHAT IS CLAIMED IS:

1. A method for translating text sentences from source language to target language using databases including vocabulary and thesaurus of source and target languages, grammar function of each word, translation index, vocabulary of verbs paradigm, vocabulary of preposition, adverb and adjectives inflections, said method comprising the steps of:
 - (i) Breaking sentence to text fragments according to punctuation marks;
 - (ii) Identifying grammar form of text fragments according to verb inflection, punctuation marks and grammar key words;
 - (iii) Identifying dominant tense form of sentence according to verb inflection and identified grammar form of text fragments;
 - (iv) Identifying subject of text fragment by locating the word appearing next to the first preposition wherein the exact location of the word (before or after the preposition) is specified according to sentence grammar rules of the source language;
 - (v) Locating all verbs in text fragment and translate each verb to source grammar form in target language using translation index;
 - (vi) Inflecting each translated verb using vocabulary paradigm according to dominant tense form and according to identified subject;

- (vii) Locate all nouns in text fragment and translate each noun to source grammar form in target language using translation index;
- (viii) Analyzing each noun word grammar form and inflection such as single/plural or male/female;
- (ix) Locating all adjectives, prepositions and article words relating to each noun;
- (x) Translating located adjectives, prepositions and article words using translation index according to respective vocabulary and translation index;
- (xi) Inflecting translated adjectives, prepositions and article words according to nouns grammar form using respective vocabulary paradigm;
- (xii) Re-arranging translated words order in each text fragment using grammar rule of target language according to grammar function of each word;

2. The method of claim 1 including vocabulary of idioms and respective translation further comprising the steps of:

- (xiii) Search each text fragments for idioms according idioms vocabulary;
- (xiv) Record respective translation of idioms;

3. The method of claim 1, wherein translating words from source language to target language further include the steps of:

- (xv) Locate all possible translation of each word using translation index;
- (xvi) Detect all synonyms of translated word using thesaurus database;

(xvii) Selecting preferred translation word or synonym word according to identified sentence subject, dominant tense form, meaning of detected idioms and meaning of adjacent words.

4. The method of claim 1 wherein the subject of the sentence is determined according to the word located after/before the first verb.

5. The method of claim 1 further comprising the step of locating key word which are frequently used in specific area.

6. The method of claim 6 further comprising the step of detecting sentence context according to located key words.

7. The method of claim 3 or 7 wherein the selection of preferred word for translation is determined additionally by detected sentence context.

8. The method of claim 1 further comprising the step of:

(xviii) Intercepting communication data received by a terminal computer;

(xix) Detecting text objects ("text sentences") in communication data designated for display;

(xx) Processing the detected text sentences according the steps (i) to (xii);

(xxi) Replacing original text objects with the respective translation;

9. The method of claim 8 further comprising the step of detecting dominant language of text objects ("source language") according language frequent key words, such as "the" in English.

10. The method of claim 9 further comprising the step of determining target language according to user definitions;

11. The method of claim 8 further comprising the step of:

(xxii) Recording original fragments text and translated text of frequently used sentences;

(xxiii) In case of detecting recorded sentences in text objects retrieve recorded translation text and to replace original text;

12. The method of claim 8 further comprising the steps of:

(xxiv) Recording translated text of groups of frequently used groups of text objects;

(xxv) In case of detecting group of recorded sentences in text objects retrieve recorded translation text and to replace original text;

13. The method of claim 9 further comprising the step of changing alignment of text objects according to paragraph format rules of target language;

14. The method of claim 8 wherein the text objects content is identified according to key words installed within the communication data.

15. A system for translating text sentences from source language to target language comprising databases including vocabulary and thesaurus of source and target languages, grammar function of each word, translation index, vocabulary of verbs paradigm, vocabulary of preposition, adverb and adjectives inflections, said system comprising of:

(i) Editing means for breaking sentence to text fragments according to punctuation marks;

- (ii) Analyzing means for Identifying grammar form of text fragments according to verb inflection, punctuation marks and grammar key words;
- (iii) Analyzing means for Identifying dominant tense form of sentence according to verb inflection and identified grammar form of text fragments;
- (iv) Analyzing means for Identifying subject of sentence according to word located after/before the first preposition;
- (v) Detecting means for locating all verbs in text fragment
- (vi) Matching means for translating each verb to source grammar form in target language using translation index;
- (vii) Editing means for Inflecting each translated verb using vocabulary paradigm according to dominant tense form and according to identified subject;
- (viii) Detecting means for locating all nouns in text fragment
- (ix) Matching means for translating each noun to source grammar form in target language using translation index;
- (x) Analyzing means for identifying each noun grammar form and inflection such as single/plural or male/female;
- (xi) Detecting means for locating all adjectives, prepositions and article words relating to each noun;

- (xii) Matching means for translating located adjectives, prepositions and article words using translation index according to respective vocabulary and translation index;
- (xiii) Edit means for Inflecting translated adjectives, prepositions and article words according to nouns grammar form using respective vocabulary paradigm;
- (xiv) Editing means for re-arranging translated words order in each text fragment using grammar rule of target language according to grammar function of each word;

16. The system of claim 15 further including vocabulary of idioms and their respective translation.

17. The system of claim 16 further comprising of:

- (xv) Detecting means for locating idioms in each text fragment according idioms vocabulary;
- (xvi) Recording means for storing respective translation of idioms;

18. The system of claim 16, wherein the process of translating words from source language to target language further comprise of:

- (xvii) Detecting means for locating all possible translation of each word using translation index;
- (xviii) Detecting means for locating all synonyms of translated word using thesaurus database;
- (xix) Analyzing means for selecting preferred translation word or synonym word according to identified sentence subject, dominant

tense form, meaning of detected idioms and meaning of adjacent words.

19. The system of claim 15 wherein the subject of the sentence is determined according to the word appearing after/before the first verb.

20. The system of claim 15 further comprising of detecting means for locating key word which are frequently used in specific area;

21. The system of claim 20 further comprising of analyzing means for determining sentence context according to located key words.

22. The system of claim 18 wherein the selection process of the preferred word for translation is determined additionally by determined sentence context.

23. The system of claim 1 further comprising of:

- (xx) Communication means for intercepting communication data received by a terminal computer;
- (xxi) Detecting means for identifying text objects ("text sentences") in communication data designated for display;
- (xxii) Programming means for processing the detected text sentences according the steps (i) to (xii);
- (xxiii) Editing means for replacing original text objects with the respective translation;

24. The system of claim 21 further comprising of detecting means for identifying dominant language of text objects ("source language") according language frequent key words, such as "the" in English.

25. The system of claim 24 further comprising the step of determining target language according to user definitions.

26. The system of claim 23 further comprising of:

(xxiv) Recording means for storing original fragments text and translated text of frequently used sentences;

(xxv) Detecting means for identifying recorded text sentences;

(xxvi) Editing means for retrieving recorded translation text and to replace original text in case of detecting recorded sentences in text objects

27. The system of claim 23 further comprising the steps of:

(xxvii) Recording means for storing translated text of groups of frequently used groups of text objects;

(xxviii) Detecting means for identifying recorded groups of text sentences;

(xxix) Editing means for retrieving recorded translation text and to replace original text, in case of detecting group of recorded sentences in text objects;

28. The system of claim 25 further comprising of editing means for changing alignment of text objects according to paragraph format rules of target language;

29. The system of claim 20 wherein the key words are located at the communication data as were defined and installed by the data author.